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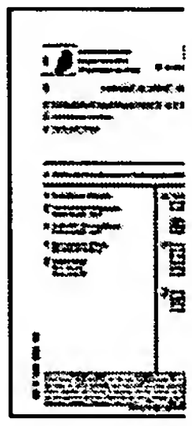
Title: **EP0539273B1: Volumetric machine with planetary movement and hypertrocoidal geometry**[German][French]

Derwent Title: Rotary positive displacement pump or motor with three elements - has male rotor eccentric from female rotor which turns in outer casing [Derwent Record]



Country: **EP** European Patent Office (EPO)

Kind: **B1** Patent [i] (See also: EP0539273A1)

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Application Number: **EP1992000402826**

IPC Code: **F04C 2/107;**

ECLA Code: **F01C1/10**; F01C1/10E;

Priority Number: 1991-10-23 **FR1991000013531**

Abstract: [From equivalent EP0539273A1] Volumetric machine with planetary movement and hypertrochoidal geometry comprising an encapsulation essentially made up of a piston (11) and of a capsule (10) which are both cylindrical, as well as of a third member in rotoidal connection with this piston and this capsule, characterised in that the directrix of the piston or of the capsule is hypertrochoidal or uniformly distant from a hypertrochoid. The machine may convey any type of fluid and convert mechanical energy into fluid energy or vice versa, according to the nature of the distribution chosen to provide intake and discharge of the fluid. This intake may further be adjustable to provide a variation in the filling. For carefully chosen geometries, the direct contact between the capsule and the piston may be used to create the relative piston-capsule movement and avoid recourse to a separate transmission.

Attorney, Agent or Firm: **Ecrepont, Robert** ;

INPADOC Legal Status: Show legal status actions Get Now: Family Legal Status Report

Designated Country: BE CH DE ES FR GB LI

Family:

PDF	Publication	Pub. Date	Filed	Title
	US5380177	1995-01-10	1992-10-23	Positive displacement machine with motion and hypertrochoidal geometr
				VOLUME TRANSFER TYPE DEVIC

☑	JP05202873A2	1993-08-10	1992-10-23	PLANETARY MOTION, ARRANGEI TROCHOIDE
☑	FR2683000B1	1994-02-04	1991-10-23	MACHINE VOLUMETRIQUE A MOI PLANETAIRE ET GEOMETRIE HYPERTROCHOUIDALE.
☑	FR2683000A1	1993-04-30	1991-10-23	MACHINE VOLUMETRIQUE A MOI PLANETAIRE ET GEOMETRIE HYPERTROCHOUIDALE.
🖹	**EP0539273B1**	1995-10-11	1992-10-15	Volumetric machine with planetary m hypertrocoidal geometry
🖹	EP0539273A1	1993-04-28	1992-10-15	Volumetric machine with planetary m hypertrocoidal geometry
☑	DE69205386C0	1995-11-16	1992-10-15	VERDRAENGERMASCHINE MIT ZY BEWEGUNG UND HYPERTROCHC GEOMETRIE.
7 family members shown above				

Description

Expand description

[From equivalent EP0539273A1]

L'invention concerne une machine volumétrique comprenant un capsulisme cylindrique constitué essentiellement d'un piston cylindrique (organe mâle), d'une capsule cylindrique qui l'entoure (organe femelle) et d'un troisième organe matérialisant deux axes parallèles à ceux des cylindres définissant la forme du piston et de la capsule, ce troisième organe étant en liaison rotoïde autour de ses axes, respectivement avec le piston et avec la capsule. Dans ces machines, le cylindre définissant la forme du piston présente un ordre de symétrie par rapport à son axe égal à s_p, celui de la capsule un ordre de symétrie égal à s_C ; s_p et s_C sont choisis de telle sorte que ces valeurs diffèrent d'une unité. En outre, la géométrie du piston et de la capsule sont choisies pour qu'il y ait contact entre ces éléments.

First Claim:

Show all claims 1. A volumetric machine comprising a cylindrical encapsulation essentially comprising a cylindrical piston (11) (male component) having with respect to its axis an order of symmetry expressed by a whole number s_p, a cylindrical capsule (10) which surrounds the said piston (female component) having with respect to its axis an order of symmetry expressed by a whole number sC and a third component rotatably connected to the male component about the axis of the said male component, rotatably connected to the female component about the axis of the said female component, the shape of this third component forcing these two axes to be parallel, the orders of symmetry s_p and s_C differing by one unit and the geometries of the piston (11) and the capsule (10) being defined so that these components are in contact CHARACTERISED IN THAT one of the male or female components has a directrix D_1 which becomes identical with a curve at a constant distance, the constant distance possibly being zero, from a closed hypertrochoid, not including the hypertrochoids transformed into hypotrochoids, peritrochoids and epitrochoids or into curves at a constant distance from these hypotrochoids, peritrochoids and epitrochoids, this hypertrochoid not having a double point nor cusp, the other component having a directrix D_2 which is the envelope of D_1 in a relating planetary movement described by two circles C_1 and C_2, with centres and radii (O_1, R_1) and (O_2, R_2) respectively, and each integral with the directrixes D_1 and D_2 and rolling on top of each other without slipping due to internal contact, $|O_1O_2|$ determining exactly the centre distance of the third component.

[German] [French]

Forward References:

Go to Result Set: Forward references (2)

PDF	Patent	Pub.Date	Inventor	Assignee	Title
	US5897589	1999-04-27	Cottenceau; Jean-Philippe	B.Braun Celsa	Endoluminal medic
	US5370508	1994-12-06	Barthod; Benoit	Alcatel Cit	Positive-displacem having orbital moti

Other Abstract Info:

DERABS G93-136446